

Work Order ID 138054

138054

Page 1

Thursday, October 22, 2015 7:30:19 AM

Item ID: D3910-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Crosstube Lug
 Start Date: 10/21/2015 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 10/21/2015 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: MLS Date: OCT 21 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3910	E								

110 Outsource process - Machining 0.00
110 HAAS CNC VERTICAL MACHINING #1
 Outsource5 Memo 0.00
 Outsource process - Machining Issue P/O to ATG: 30248
 MANUFACTURE AS PER DWG
 C of C is required

CL OCT 23 2015 12

120 Receive & Inspect for Damage & Mat'l Certs 0.00
120
 Packaging Memo 0.00
 Packaging Ensure C of C is attach

12x SP15-11-11

130 QC6- Inspect dimensions to drawing 0.00
130
 QC Memo 0.00
 Quality Control

(12)

DAS
38
9-89
NOV 16 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
Misidentified	☐	Past Due	☐				

Work Order ID 138054***138054***

Page 2

Thursday, October 22, 2015 7:30:19 AM

Item ID: D3910-5 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Crosstube Lug
Start Date: 10/21/2015 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 10/21/2015 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: <u>SS24</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.02							
Quality Control									

ML5 12 ML5 15-11-18
ML5 NOV 19 2015
ML5 NOV 19 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
Misidentified	☐	Past Due	☐				

Picklist Print

Thursday, October 22, 2015 7:30:23 AM

Page 1

Work Order ID: 138054

138054

Parent Item: D3910-5

D3910-5

Parent Item Name: Crosstube Lug

Start Date: 10/21/2015

Required Date: 10/21/2015

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A 13.02.28 NEW ISSUE DD VERF:JFS
13.09.26 AS PER REV.D DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2423

Manufactured

No

f

425.6395

1.515789

D2423

CZ

NOV 19 2015

Lug Extrusion

Location

Loc Qty

Loc Code

Metec

425.6395151

127892

119.689515

131451

305.95

D3910-5P

Purchased

No

Each

0.0000

12

D3910-5P

12 x 8075-11-11

Crosstube Lug

DQA: _____ Date: _____

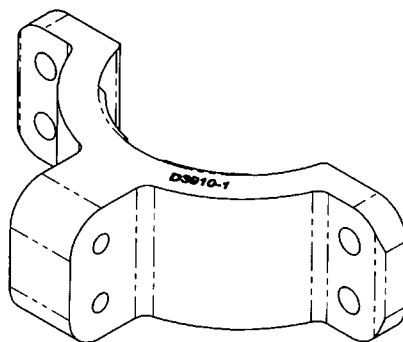


WORK ORDER NON-CONFORMANCE / UPDATE

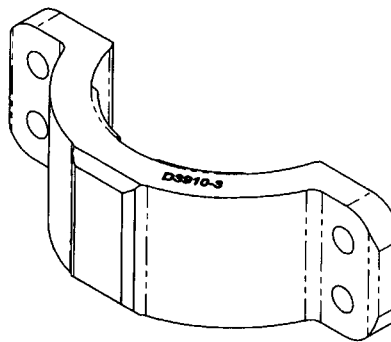
QA Closed: _____ Date: _____

Work Order update only ☐

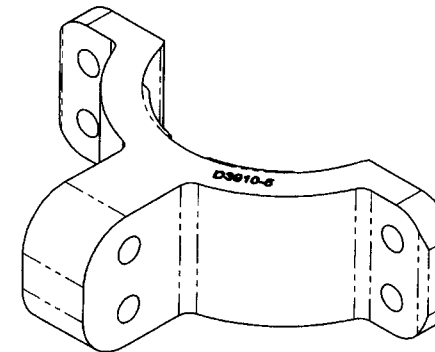
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					



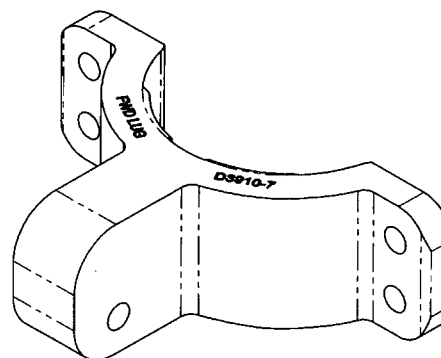
D3910-1 X-TUBE LUG



D3910-3 X-TUBE LUG



D3910-5 X-TUBE LUG



D3910-7 X-TUBE LUG

NOTES:

- 1) MATERIAL: MAKE FROM D2423 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER TO A DEPTH OF 0.010 $\pm$ 0.005 IN THIS LOCATION WITH A TOOL TIP RADIUS OF 0.015 $\pm$ 0.005
- 7) WEIGHT -1: 0.32 lbs
-3: 0.25 lbs
-5: 0.36 lbs
-7: 0.37 lbs
- 8) IDENTIFICATION: ENGRAVE "FWD LUG" TO A DEPTH OF 0.010 $\pm$ 0.005 IN THIS LOCATION WITH A TOOL TIP RADIUS OF 0.015 $\pm$ 0.005

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO 138054 MLJ
1510-22

RELEASED

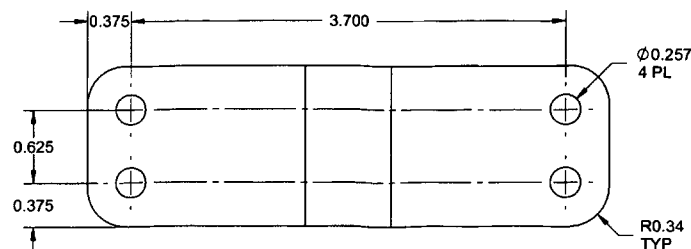
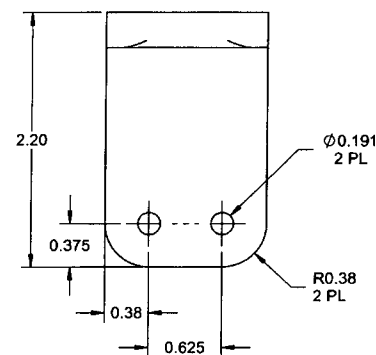
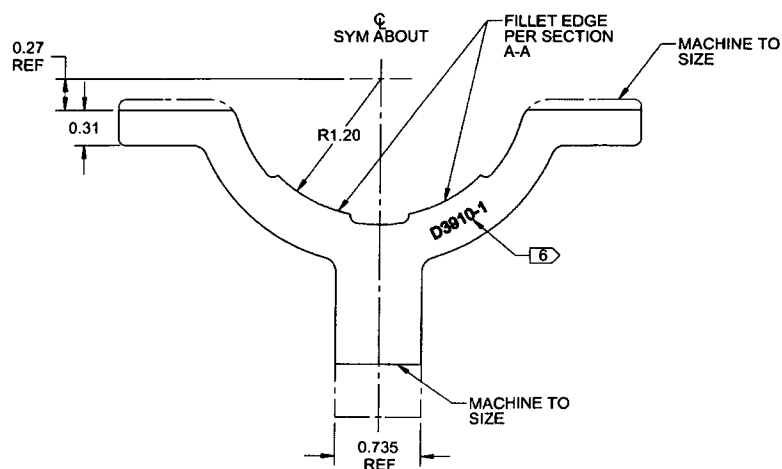
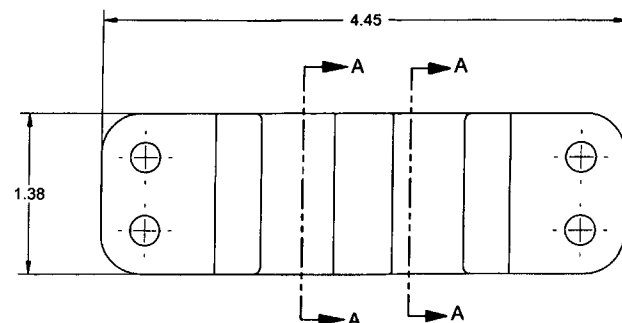
2014 JUN 05
ECN 14-572

E	ADD -7 PER NCR14-3871	AJS	14.05.16
D	CHANGED FASTENER HOLES IN -5 FOR 1/4" HARDWARE. REASON: EASE OF INSTALLATION.	AJS	13.08.14
C	ADD -5.	AJS	13.08.08
B	Ø0.257 HOLES: 4 PL WAS 2 PL (A3-2) & (A3-3); R0.34 FILLET WAS R0.50 (A3-2) & (A3-3). REASON: SEE TR-D350-507-2	JPH	10.03.16
A	NEW ISSUE	JPH	10.03.04
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3910	SHEET 1 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	X-TUBE LUG (350)	NTS
DATE	14.05.16	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



ROUND EDGE
R0.06 MIN - R0.10 MAX
2 PL

SECTION A-A



D3910-1 X-TUBE LUG

RELEASED

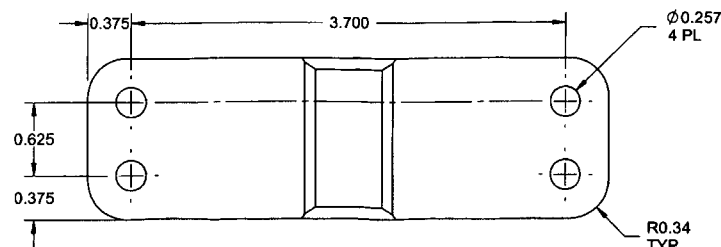
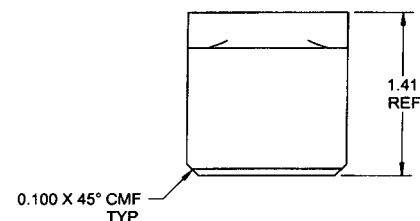
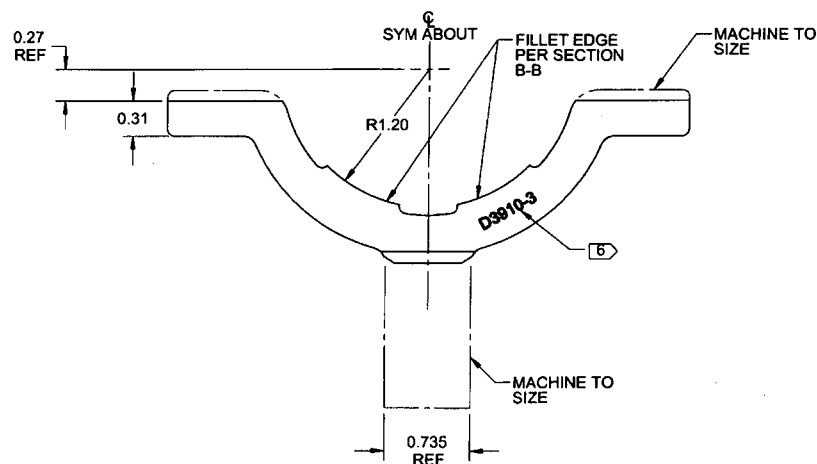
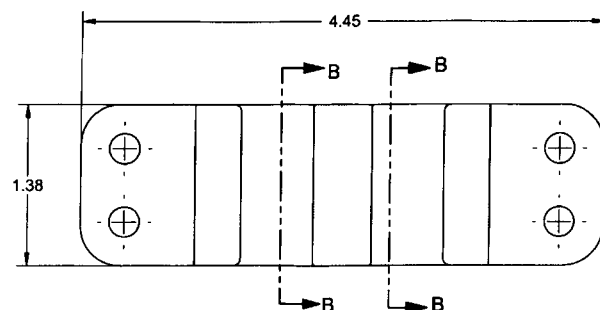
2014 JUN 05

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DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
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MFG. APPR.	<i>[Signature]</i>	SHEET 2 OF 5	
APPROVED	<i>[Signature]</i>	TITLE X-TUBE LUG (350)	SCALE
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SECTION B-B



ROUND EDGE
R0.06 MIN - 0.10 MAX
2 PL



D3910-3 X-TUBE LUG

RELEASED

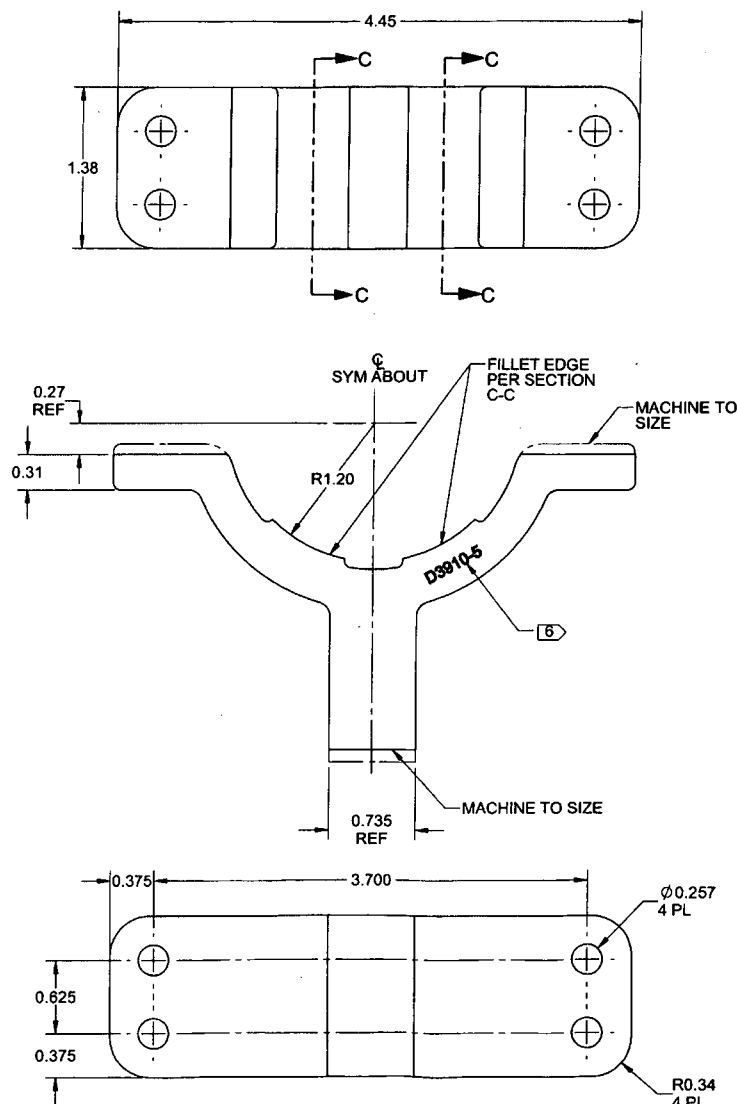
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MFG. APPR.	<i>[Signature]</i>	D3910	SHEET 3 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	X-TUBE LUG (350)	NTS
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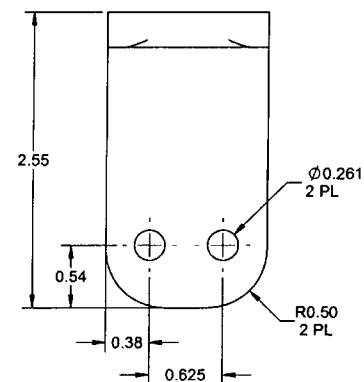
SECTION C-C



ROUND EDGE
R0.06 MIN - 0.10 MAX
2 PL



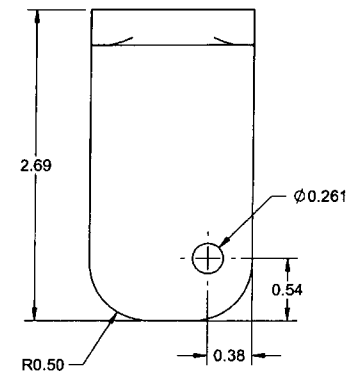
D3910-5 X-TUBE LUG



RELEASED

2014 JUN 05 *qp*

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DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3910	SHEET 4 OF 5
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2014 JUN 05 *q*

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3910 TITLE X-TUBE LUG (350) COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF DART AEROSPACE LTD AND ARE NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT	REV. E
DRAWN	AJS		SHEET 5 OF 5
CHECKED	<i>[Signature]</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		SCALE
DE APPR.	<i>[Signature]</i>		NTS
DATE 14.05.16			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO30248

Purchase Order Date 10/23/2015

PO Print Date 10/23/2015

Page Number 2 of 3

Order From :

VC-MET003

Ship To : DART AEROSPACE LTD

METEC METAL TECHNOLOGY INC.
20 TERRY FOX DRIVE PO BOX 781
VANKLEEK HILL, ON K0B 1R0
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613 678 3957

Ship To Contact

Ship To Phone

Ship Via:

Dart Truck

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

CAD

FOB

Destination-Collect

3	D3394-1P	Lug	11/11/2015	20.00	\$14.00	\$280.00
			Yes	Each		
			11/11/2015			

AS PER DWG D3394 REV. B
B138051
ALODINE AND PAINT AS PER QSI 005

Sp15-11-03

Line Total: \$280.00

4	D3910-3P	Crosstube Lug	11/11/2015	12.00	\$14.00	\$168.00
			Yes	Each		
			11/11/2015			

AS PER DWG D3910 REV. E
B138053
ALODINE AND PAINT AS PER QSI 005

Line Total: \$168.00

5	D3910-5P	Crosstube Lug	11/11/2015	12.00	\$14.00	\$168.00
			Yes	Each		
			11/11/2015			

AS PER DWG D3910 REV. E
B138054
ALODINE AND PAINT AS PER QSI 005

Sp15-11-11

Note:

10/23/2015



20 Terry Fox Drive
Vankleek Hill, Ontario K0B 1R0 , Canada
Tel: (613) 678-3957
Fax: (613) 678-3956

Delivery Slip No.: 20808
Date: Nov 06, 2015
Page: 1

Sold to: Dart Aerospace Ltd. Att. Linda Lacelle 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7	Ship to: Dart Aerospace Ltd. Att. Linda Lacelle 1270 Aberdeen Street Hawkesbury, Ontario K6A 1K7
Order No.: 30248	Sold By: Walz, Christian D.
Shipped By: your truck	Ship Date: Nov 06, 2015

Description	Unit	Ordered quantity	Shipped quantity	Backorder quantity
D2230-1 Mounting Lug, as per drawing D2230 Rev.G, Alodine and Paint as per QSI 005	Each	50		
D2731-3 Mounting Lug, as per drawing D2731 Rev.C, Alodine and Paint as per QSI 005	Each	24		
D3394-1 Lug Assembly, as per drawing D3394 Rev.B, Alodine and Paint as per QSI 005	Each	20		
3910-3 Crosstube Lug, as per drawing D3910 Rev.E, Alodine and Paint as per QSI 005	Each	12	12 ✓	
3910-5 Lug, as per drawing D3910 Rev.E, Alodine and Paint as per QSI 005	Each	12	12 ✓	
3910-7 Crosstube Lug, as per drawing D3910 Rev.E, Alodine and Paint as per QSI 005	Each	12	12 ✓	
The delivered goods must be inspected upon receipt to confirm compliance. Should there be discrepancies please notify METEC within 30 days of delivery. The goods are otherwise deemed accepted.				
Received by _____		Thank you for your order!		



20 Terry Fox Drive, Vankleek Hill, Ontario K0B 1R0

Tel. (613) 678-3957 & (613) 678-2782 Fax (613) 678-3956 metec@metec.ca

CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

same

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>P.O. NUMBER</u>
12	D3910-3	Lug Batch#131451 Paint#20150	30248
12	D3910-5 ✓	Crosstube Lug Batch#131451 Paint#20150	30248
12	D3910-7	Crosstube Lug Batch#131451 Paint#20150	30248

MATERIAL: supplied by DART

SP15-11-11

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.

Jan Norris

Vankleek Hill, November 6, 2015